

AMENDMENTS TO THE CLAIMS

Presented below is a complete set of claims with current status indicators.

1. (currently amended) An output circuit for use in an implantable cardiac stimulation device, comprising:

an output adapted for connection across a load;

a charging circuit;

a voltage supply switchably storage device coupled across between the charging circuit and the output;

a capacitor switchably coupled across the voltage storage device and the output;

pulse-width modulation circuitry operative to provide a pulse waveform; and

an H-bridge including a first leg and a second leg, each leg including a first switching device operative to receive the pulse waveform, and alternately couple and decouple the first voltage supply storage device across the capacitor and the output in accordance with the pulse waveform to provide a stimulation output having a pulse-width modulated waveform, the capacitor operative to receive current from the voltage storage device when the voltage storage device is coupled across the output and to supply current to the output when the voltage storage device is decoupled across the output.

2. – 3. (previously canceled)

4. (previously presented) The output circuit of claim 1 wherein each leg includes a second switching device that controls polarity of the stimulation output.

5. (original) The output circuit of claim 4 further comprising a polarity control circuit coupled to the second switching device of each leg of the H-bridge.

6. (previously presented) The output circuit of claim 1 further comprising a comparison circuit that compares a desired output waveform to a timing waveform and provides control signals to the pulse-width modulation circuitry to define the pulse waveform.

7. (canceled)

8. (currently amended) The output circuit of claim [[7]] 1 wherein the capacitor is a non-polar capacitor.

9. (currently amended) The output circuit of claim [[7]] 1 further comprising an inductor coupled in series with the legs of the H-bridge and a pair of blocking diodes coupled to the inductor.

10. (canceled)

11. (currently amended) The output circuit of claim [[10]] 4 wherein the second switching device of each leg is operative to receive a control signal from a polarity control circuit.

12. (previously presented) The output circuit of claim 11 wherein the H-bridge comprises first, second, and third legs and wherein, when the second switching device of the first leg receives a polarity control signal, the first switching devices of the second and third legs receive a pulse waveform.

13. – 19. (canceled)

20. (currently amended) An output circuit for use in an implantable cardiac device comprising:

an output adapted for connection across a load;

a charging circuit;

a power source switchably first capacitor coupled across between the charging circuit and the output;

a second capacitor switchably coupled across the first capacitor and the output;

a pulse-width modulation circuit that generates a pulse-width modulation control signal corresponding to a desired waveform; and

an H-bridge including a first leg and a second leg, each leg including a pulse-width modulation control device operative to receive the pulse-width modulation control signal, and alternately couple and decouple the power source first capacitor across the

second capacitor and the output in accordance with the control signal to provide a stimulation output having the desired waveform.

21. (previously presented) The output circuit of claim 20 further comprising a comparison circuit that compares the desired output waveform to a timing waveform and provides a control signal to the pulse-width modulation circuit to define the pulse-width modulation control signal.

22. (previously presented) The output circuit of claim 20 wherein the H-bridge comprises a plurality of legs, each leg including a pulse-width modulation control device.

23. (original) The output circuit of claim 22 wherein each leg further includes a polarity control device.

24. (currently amended) The output circuit of claim 23 wherein the H-bridge comprises first, second, and third legs and wherein, when the polarity control device of the first leg controls the polarity, the output voltage modulating devices of the second and third legs are configured to independently alternately couple and decouple the power-source first capacitor across the output.

25. (currently amended) The output circuit of claim 22 further comprising a wherein the second capacitor coupled across the output and is operative to receive current from the power-source first capacitor when the power-source first capacitor is coupled across the output and to supply current to the output when the power-source first capacitor is decoupled across the output.

26. (currently amended) The output circuit of claim 25 wherein the second capacitor is a non-polar capacitor.